## SPECIFICATION:

**Pages 15-16** (substitute paragraph):

The operation of the pivotal nozzle body in **Fig. 5** is essentially the same as in **Figs. 1** through **4**. Only the angle range of the hose wand is changed by the selection of $\theta_5$ and $\theta_6$. The maximum upright angle $\theta_7$ (obtuse angle between hose wand ports 154 and 136 is [[- ]]greater than ninety degrees) is the same as maximum upright angle $\theta_3$ in **Figs. 1** through **4**, but the minimum angle $\theta_8$ (acute angle between hose wand ports 154 and 136 is [[- ]]less than ninety degrees) can be much lower than the minimum angle $\theta_4$ in **Figs. 1** through **4.** Because angle ~~for~~ $\theta_8$ is a negative angle (hose wand axis extending below **x-y** plane), the hose wand does not need to be twisted 180 degrees to be parallel to the floor. In fact, for the choices of $\theta_5 = 10$ degrees and $\theta_6 = 35$ degrees, hose **20** would only need to be twisted about 100 degrees from its **152a** position (see **Fig. 7**) to reach parallel to the floor (**x-y** plane). Further rotation moves hose wand **20** below cleaning surface **68** (**x-y** plane) as seen in **Fig. 5** to form an acute angle between longitudinal axis **145** of hose wand port **154** and the longitudinal axis of hose wand port **136** (negative **z-axis**).

**Pages 16-17** (substitute paragraph):

The issue of stability of the nozzle during use occurs because of the ability of the disclosed pivot nozzle to pivot around a pivot axis. If the angle of the pivot axis is not chosen correctly or if the pivot joint has too little friction ~~to friction~~ for stable use, the tool end of the nozzle can simply flop around on the end of the nozzle uncontrollably. For different uses, and functions, different parameters are needed. For example, for a floor or upholstery tool the pivot axis works best if it is closer than 45 degrees from the **x-axis** as defined in the drawings. While larger angles work fine for other cleaning purposes (i.e. dust brush use) placing the pivot axis near the **y-axis** and or the z-axis makes the nozzle unstable for floor and upholstery cleaning (see **Fig. 6** for example of floor and upholstery mode). This instability results from two factors. When the pivot axis is too close to the z-axis, any differential **x-axis** force on the ends of the arms can tend to spin the lower housing about the pivot axis. Similarly, if the pivot axis is too close to the **y-axis**, **x-axis** force on either arm can tend to rotate the lower housing about the pivot axis. It turns out that for floor and upholstery cleaning, the best stability and range of angle orientations is achieved with a pivot axis

no more than 30 degrees from the **x-axis**. Unfortunately, this range is not necessarily very good for some other tools, namely the dust brush and arms in crevice mode, which experience **y-axis** forces during normal use. This **y-axis** force tends to rotate the tool around the pivot axis (see pivot axises **40** and **140**). This tool rotation problem, however, is easily solved by simply providing some internal friction to the pivot joint, so that during normal dusting or crevice tool use, the **y-axis** forces are not great enough to overcome the friction within the pivot joint. This friction, however, cannot be so great that it interferes with the use of the tool in floor cleaning mode. The nozzle body should be easily pivotable by the user, when twisting on the hose wand attached to it. Luckily, the twisting force a user can place on the hose wand, and the leverage the extended arms can provide, is considerably greater than the friction needed for stable dusting or crevice tool use. Thus, the user can easily rotate the hose wand about the pivot axis and lower the hose wand to the floor to get under furniture and the like even, ~~even~~ when sufficient friction is present to allow normal dusting and crevice tool operation. The pivot joint friction may come in a number of forms, from a continuous friction force between the upper and lower housing, a notch and tab arrangement to provide specific orientations where greater friction force is located ~~located~~, etc. or a combination of different friction methods.